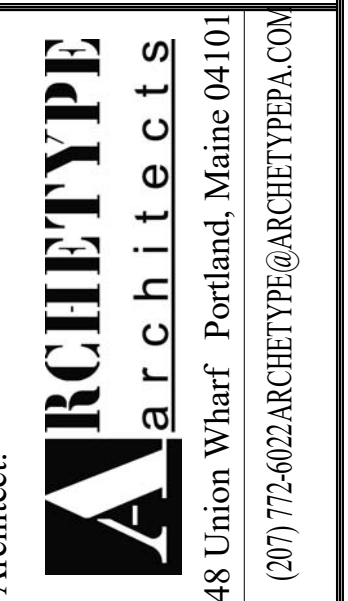


747 CONGRESS LLC

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Project:

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Scale: 12" = 1'-0"

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CODE SUMMARY

ACO.1

Table 705.8 Maximum Area of Wall Openings Based on Fire Separation Distance and Degree of Opening Protection

Table with 3 columns: Fire Separation Dist., Degree of Opening Protection, Allowable Area. Rows include 0' to less than 3', 3' to less than 5', 5' to less than 10', 10' to less than 15', 15' to less than 20', 20' to less than 25', 25' to less than 30', 30' or greater.

705.8.5 Vertical Separation of openings

Not Required, Exception no. 2, Automatic Sprinkler System in Accordance with 903.3.1.1

705.11 Parapets

Not required on exterior walls per Exception No. 5 where the wall is permitted to have at least 25% of the exterior wall areas containing unprotected openings per Table 705.8, and Exception No.5 where the entire building is covered with a class C roof covering, the exterior wall shall be allowed to terminate at the underside of the roof sheathing or deck in Type 3 construction provided the roof sheathing or deck is constructed of approved fire retardant treated wood for a distance of 4'.

707 Fire Barriers (shafts, exit and floor opening enclosures)

707.3.1 Shaft enclosures shall comply with Section 708.4 (2 hours)

707.3.2 The fire resistance rating of exit enclosures shall comply with Section 1022.1 (2 hours). (Refer to IBCB 2009 at end of this page)

707.5 Fire barriers shall extend from the top of the floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above.

1008.1.1 Size of Doors - Minimum Clear width = 32", maximum leaf width 48"

Exception no. 1- Minimum and maximum widths do not apply to door openings not part of the required means of egress in Group R-2 occupancies. Note: Non-egress doors are sized to meet Accessibility requirements per 521 CMR.

1008.1.4.4 Group R-2 occupancies building entry doors are permitted to be equipped with access control system.

1008.1.5 Provide a level landing on each side of door, except at exterior locations with 2% slope pitch for drainage.

1008.1.8 48" plus door width required minimum space between doors in series.

1008.1.9.10 Interior stairway means of egress doors shall be openable from both sides. Exception 1: Stairway discharge doors shall only be locked from the opposite side.

1008.1.10 Doors to electrical rooms with equipment rated at 1200 amps or more will require panic hardware.

1009 Stairways

1009.1 Stairway width- Minimum required width of 44" is provided. (Refer to Existing Stair codes in IBCB 2009).

1013.1 Guard (rails) are required at stairs more than 30" above the floor and within 36" horizontally to the edge of the open side. (Refer to Existing Stair codes in IBCB 2009).

1016 Exit Access Travel Distance

Table 1016.1 Exit Access Travel Distance with columns: Occupancy, Max. Distance, Sprinklered, Actual Distance.

1007.10 Directional signage shall be provided at elevator landings.

1008 Doors, Gates and Turnstiles

36.3.4.1 Fire alarm system in accordance with section 9.6 provided

36.3.4.2 Fire alarm initiation

(1) Manual Means (2) Automatic fire detection system (3) Automatic sprinkler system plus a minimum one fire alarm box

T7.2.2.2.1.(b) EXISTING STAIRS: Minimum width clear, 36 in. (Existing historic stairs A and C do not meet required width, see calculation with A.7.3.3.1 for Capacity Factors)

Maximum height of riser: 8 in. Minimum tread depth: 9 in. Minimum headroom: 6 ft. 8 in. Maximum height between landings: 12 ft.

7.2.2.3.1.2 Stair material same as building construction

7.2.2.4.1.1 New handrails: Not < 34 in. and not > 38 in.

7.2.2.4.4.2 Existing handrails not < 30 in. and not > 38 in. (Existing handrail at Stair B is being retrofitted to meet code)

7.2.2.4.4.5 New handrails provide min. 2-1/4 in. clearance between stair and wall

7.2.2.5.4 Stairway signage shall comply with 7.2.2.5.4.1 parts (A) thru (M)

28.2.4 Number of Exits

28.2.4.2 A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided that all the following conditions are met:

(1) There are four or fewer guest rooms or guest suites per story. (2) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5 (3) The exit stairway does not serve more than one-half of a story below the level of exit discharge. (4) The travel distance from the entrance door of any guest room or guest suite to an exit does not exceed 35 ft. See drawings for distance from guest rooms to exit

(5) The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1-hour fire resistance rating. (6) All openings between the exit stairway enclosure and the building are protected with self-closing door assemblies having a minimum 1-hour fire protection rating.

43.10.4.6.2 Interior wall and ceiling finishes in exits, other than in one- and two-family dwellings, shall meet one of the following criteria (1) The material shall have a flame spread classification of Class C or better.

508.3.1 Occupancy classification

Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the building or portion thereof in which the nonseparated occupancies are located.

508.3.3 Separation. No separation is required between nonseparated occupancies. Exceptions: 2, Group I-1, R-1, R-2 and R-3 dwelling units and sleeping units shall be separated from other dwelling or sleeping units and from other occupancies contiguous to them in accordance with the requirements of Section 420.

Chapter 6- Types of Construction

Table 601 - Fire Resistance Ratings for Building Elements

Table with 3 columns: Building Element, Type 3B, Type 3B. Rows include Primary Structural Frame, Exterior Walls, Interior Walls, Non-Bearing Walls and Partitions, Exterior, Non-Bearing Walls and Partitions, Interior, Floor Construction and Secondary Members, Roof Construction and Secondary Members.

Table 602- Fire Resistance Rating Requirements For Exterior Walls Based on Fire Separation Distance (non-loadbearing walls)

Table with 3 columns: Fire Separation Dist., Construction Type, Group B, R. Rows include x < 5', 5' <= x < 10', 10' <= x < 30', x >= 30'.

*Higher of 2 determining factors (Tables 601 and 602) indicate exterior bearing walls to be 2 hour fire resistance rated from the inside.

903.4 Valve controlling water supply for automatic sprinkler system shall be electronically supervised by a fire alarm control unit.

905 Standpipe Systems

905.2 Standpipe Systems will be provided in accordance with NFPA 14

905.3.1 Height- Class 1 Standpipes are allowed in buildings equipped throughout with an automatic sprinkler system.

905.4 Class I standpipe hose connections shall be provided in the following locations:

- In every stairway at an intermediate floor level between floors, unless otherwise approved by the fire code official
Where roof slope is less than 4:12 each standpipe shall be provided with a hose a connection either on the roof or the highest landing of a stairway with stair access to roof.
On each side of the wall adjacent to exit opening of horizontal exit (Not required where hose stream is reachable).

906 Portable Fire Extinguishers- Required in Group R, R-1 occupancies: provided in accordance with NFPA 10

Exception: In Group R and B occupancies extinguishers only required on each floor.

907 Fire Alarm and Detection Systems

907.2 Where Required-New Buildings and Structures

907.2.2 Group B: Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1

907.2.9 Group R-1: Manual fire alarm station is required in buildings with more than 12 dwelling units in accordance with Section 907.5

907.2.9.2 Smoke alarms shall be installed per Section 907.2.11 (within sleeping units)

907.2.11.1 Group R-1: Smoke alarms shall be installed in each sleeping area and in each room on the path from the sleeping area to the means of egress.

912.2.1 Fire Department Connections: Locations as approved by fire chief so vehicles and hose lines will not interfere with building access (visible location on street side of building).

6.1.14.3 Mixed Occupancies

6.1.14.3.1 Each portion of the building shall be classified as to its use in accordance with section 6.1

6.1.14.3.2 The means of egress facilities, construction type, protection, and other safeguards in the building shall comply with the most restrictive fire and life safety requirements of the occupancies involved

NFPA TABLE A.8.2.1.2 CONSTRUCTION TYPE III(200)

28 - NEW HOTEL

28.2.5.4 Common Path of Travel <50 FT.

28.2.6.2 Travel Distance within unit < 125 FT.

28.2.6.3.2 Travel distance from unit to exit < 200 FT.

28.2.2.1.2 Sprinkled exit enclosure 1 hour

28.2.2.12.2 In buildings protected by approved, supervised automatic sprinkler system, area of refuge shall not be required. Building to be fully sprinkled by automatic NFPA 13 system.

28.3.4.1 Fire alarm system in accordance with section 9.6 provided

28.3.4.2 Fire alarm initiation (1) Manual Means (2) Manual fire alarm box located at hotel desk (3) Automatic sprinkler system (4) Automatic detection system other than sleeping room smoke detectors

28.3.6.1.3 Corridor walls: 1/2 Hour (SPRINKLED)

28.3.6.2.1 Corridor doors: 20 min rated (.33 HOURS) (Existing historic unit entry doors U04 to remain - waiver required)

28.3.6.2.3 Corridor Doors: Self closing and self-latching

28.3.7.2 Dwelling unit demising walls: 1/2 Hour (1 HOUR REQ FOR IBC)

36 - NEW MERCANTILE

36.2.2.1.2.2 In buildings protected by approved, supervised automatic sprinkler system, area of refuge shall not be required.

36.2.5.2.1 Dead-end corridors shall not exceed 50 ft.

36.2.5.3 Common Path of Travel <100 ft.

36.2.6.2 Travel distance <250 ft.

CODE SUMMARY IBC 2009:

Chapter 3- Use and Occupancy Classification Mixed Use (NonSeparated)

304.1 Business Group B Restaurant, occupancy less than 50

310.1 Residential Group R-1 Hotel

Chapter 4- Special Detailed Requirements Based on Use and Occupancy

303.1 Assembly Group A Exceptions: (1) A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

420 Group R-1

420.2 Separation Walls-Walls separating Dwelling Units from Dwelling Units and from other occupancies are Fire Partitions in accordance with Section 709 (1 hour rated).

420.3 Horizontal Separation- Floor Assemblies separating Dwelling Units from Dwelling Units and from other occupancies are Horizontal Assemblies in accordance with Section 712 (1 hour)

Chapter 5- General Building Heights and Areas

Table 503 Allowable Heights and Areas

Business Group B Type 3B Construction - 3 stories, 19,000 sf per story

Residential Group R-1 Type 3B Construction - 4 stories, 16,000 sf per story

Total Building Sq Footage : 12,639 sf.

504.2 Automatic Sprinkler System Increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 The value specified in Table 503 for maximum building height increased by 20 feet and the maximum number of stories is increased by one.

Construction Type 3B- Group B (Business most restrictive): 3 stories allowed (3 proposed) Refer to building elevations for determination of basement by definition.

508 Mixed Use and Occupancy

508.3 Nonseparated occupancies

Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

717.2.5 Double Stud Walls Batts or blankets of mineral or glass fiber insulation shall be allowed as fire blocking in walls constructed using parallel rows of studs or staggered studs.

717.2.2 Concealed Wall Spaces Fire blocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs as follows:

- Vertically at ceiling and floor levels
Horizontally at intervals not exceeding 10'.

71 7.3.2 Use Group R-1 Draft stopping in floor/ceiling spaces not required per Exception No. 1, Sprinkler system provided in accordance with Section 903.3.1.1.

717.4.2 Draft Stopping In Attics

717.4.2 Group R-1 Not required in attics and concealed roof spaces per Exception No. 2, Sprinkler system provided in accordance with Section 903.3.1.1.

Chapter 8- Interior Finishes

Table 803.9 Interior Wall and Ceiling Finish Requirements

By Occupancy- Sprinklered

Group Exit Enclosures Corridors Rooms and Enclosed Spaces

R-1 Class B Class C Class C

Chapter 9- Fire Protection Systems

Table 903.2 Occupancy Related Automatic Sprinkler Requirements

Threshold Occupant Load Comment

R-1 Sprinklers required Any level -

903.3.1.1 NFPA 13 Sprinkler Systems

The building will be equipped throughout with an automatic sprinkler system in accordance with NFPA 13.

903.3.2 Quick response or residential automatic sprinklers shall be installed in dwelling units.

1103.10 GUARDS - Guards shall comply with Sections 1103.10.1 and 1103.10.2.

1103.10.1 HEIGHT - Existing guards shall comply with the requirements of Section 505.

1103.10.2 GUARD OPENINGS - The spacing between existing intermediate railings or openings in existing ornamental patterns shall be accepted. Missing elements or members of a guard may be replaced in a manner that will preserve the historic appearance of the building or structure

1105.1 GENERAL- Historic buildings undergoing a change of occupancy shall comply with the applicable provisions of Chapter 9, except as specifically permitted in this chapter. When Chapter 9 requires compliance with specific requirements of Chapter 5, Chapter 6, or Chapter 7 and when those requirements are subject to the exceptions in Section 1102, the same exceptions shall apply to this section.

1105.4 OCCUPANCY SEPARATION - Required occupancy separations of 1-hour may be omitted when the building is provided with an approved automatic sprinkler system throughout.

CODE SUMMARY NFPA 101 LIFE SAFETY 2009:

SPRINKLED WITH NFPA 13

NFPA 6.1.8.1.3 OCCUPANCY - HOTEL

NFPA 6.1.10 OCCUPANCY - MERCANTILE

6.1.14.1.3 Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the Code that apply to the predominant occupancy:

(1) Mercantile

A.6.1.10.1 Mercantile Occupancy: Mercantile Occupancies include the following: (4) Restaurants with fewer than 50 persons

CODE SUMMARY

Applicable Codes

- MUBEC - Maine Uniform Building and Energy Code
2009 International Building Code - IBC (except chapters 11 and 30)
2009 IECC: International Energy Conservation Code
2009 IEBC: International Existing Building Code
NFPA 101 Life Safety

Accessibility Codes

- State of Maine Human Rights Act
ADAAG Americans with Disabilities Act
ICC ANSI 117.1 Accessible and Usable Buildings and Facilities

PROJECT SUMMARY:

Conversion of an existing historic building (mortuary) to a mixed-use Inn and Restaurant in accordance with the National Park Service Guidelines for Rehabilitating Historic Buildings. The work will affect all aspects of the building including, but not limited to, the foundations, the internal structure and walls, existing historical elements for repair and replacement, doors (interior and exterior), windows, roofing and flashing. The building will be sprinkled with an NFPA 13 system.

Square Footages:

Table with 2 columns: Area, Square Feet. Rows include Basement (4376 sf), First Floor (4080 sf), Second Floor (2256 sf), Third Floor (1927 sf).

Total Sq Footage : 12,639

Unit Count:

Table with 2 columns: Unit Type, Count. Rows include Ground Floor (4), First Floor (3), Second Floor (4), Third Floor (4), TOTAL (15).

712.3.2 Rated access doors permitted in fire rated ceiling assemblies.

713.1.1 Penetrations of fire resistance rated walls by ducts (not protected by dampers): Sleeves through walls, in cavity construction, shall be securely fastened (a fire stop assembly is required between sleeve and pipe/duct).

713.3.2 Membrane penetrations shall be limited to 16 square inches each and an aggregate of 100 square inches/100 sf of wall

- Offset boxes by 24" on opposite sides of wall
Not required at sprinklers with escutcheon plate

714.4 Where fire resistance rated floor/ceiling assemblies are required, voids along curtain wall and floors shall be sealed with an approved system, matching the fire resistance rating of the floor system.

715.4 Fire Door and Shutter Assemblies

Table 715.4

Table with 4 columns: Type of Assembly, Required Assembly Rating, Min Door Assembly Rating (hrs), Duration. Rows include Fire Walls, Fire Barriers (2 Hr), Other Fire Barriers, Fire Partitions, Corridor walls, Other fire partitions, Exterior Walls, Smoke Barriers.

715.4.3.1 Fire door assemblies shall meet requirements for smoke and draft control door assemblies

717 Concealed Spaces

717.2 In combustible construction fire barriers shall be installed to cut off concealed draft openings and form a barrier between floors. Fireblocking required at:

- Mineral wool allowed in double stud walls
Vertically at floors and ceilings
Horizontal spacing not exceeding 10 feet
Connections between horizontal and vertical spaces (soffits, dropped ceilings, etc.)
Stairways at top and bottom of run between stringers
Piping, vents, etc.

CODE SUMMARY - IBCB 2009:

705.3.1.1 Single-exit buildings

Only one exit is required from buildings and spaces of the following occupancies:

- 1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22 860 mm).
5. Groups R-1 and R-2 not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet. The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour. WAIVER REQUEST FOR AN ADDITIONAL FLOOR.

912.7 Enclosure of vertical shafts

Enclosure of vertical shafts shall be in accordance with Sections 912.7.1 through 912.7.4.

912.7.1 Minimum requirements

Vertical shafts shall be designed to meet the International Building Code requirements for atriums or the requirements of this section.

912.7.2 Stairways

When a change of occupancy classification is made to a higher hazard category as shown in Table 912.4, interior stairways shall be enclosed as required by the International Building Code.

Exceptions:

- 1. In other than Group I occupancies, an enclosure shall not be required for openings serving only one adjacent floor and that are not connected with corridors or stairways serving other floors.
2. Unenclosed existing stairways shall not be enclosed in a continuous vertical shaft if each story is separated from other stories by 1-hour fire-resistance-rated construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and the occupant space shall have at least one sprinkler head above the openings on the tenant side.

1103.9 STAIRWAY RAILINGS - Grand stairways shall be accepted without complying with the handrail and guard requirements. Existing handrails and guards at all stairs shall be permitted to remain, provided they are not structurally dangerous.

707.5.1 Supporting construction shall be protected to required fire resistance rating of the fire barrier supported (fireblocking is required in cavities if shaft extends through the floor level at every floor level).

708 Shaft Enclosures (stairs, chutes, elevators, duct shafts, etc.)

708.1 Shaft enclosures to be constructed as fire barriers

708.2 Fire barrier construction not required at piping, conduits, etc. penetrations if protected per Section 712.4

708.4 Shaft enclosures shall have a 2 hour fire resistance rating where connecting 4 stories or more, and shall have a fire resistance rating not less than the floor assembly penetrated but not exceeding 2 hours.

708.8.1 Penetrations other than those necessary for the purpose of the shaft shall not be permitted.

708.14.1 Elevator Lobby Enclosure

Not required per exception no. 4, "building is protected by an automatic sprinkler system in accordance with section 903.3.1.1"

709 Fire Partitions (exit access corridors, dwelling unit separations, etc.)

709.3 Fire Resistance Ratings

Fire partitions shall have a fire resistance rating of not less than 1 hour. Walls Separating Dwelling Units (420.2)

Corridor Walls per Table 1018.1 1/2 hour/when fully sprinklered per NFPA 13)

709.4 Continuity: Fire partitions shall extend from floor below to underside of floor/roof sheathing above. Supporting structure shall be protected similarly to wall. Fire blocking is not required if equipped with automatic sprinkler system and sprinklers are installed within combustible floor/ceiling and roof/ceiling spaces.

709.5 Where exterior walls serve as part of the required fire resistance rating separation, walls shall comply with Section 705 Exterior Walls and fire resistance rated requirements shall not apply.

712.3 Horizontal assemblies separating dwelling units shall be a minimum of 1 hour fire resistance rated construction.

1018.6 Corridor Continuity: Fire resistance rated corridors shall be continuous from point of entry to an exit. Elevator shall be fire resistance rated and smoke protection.